NNDSS Modernization Initiative Technical Assistance Coordination Team Update
January 16, 2015

Colleagues,

Please find below the National Notifiable Diseases Surveillance System (NNDSS) Modernization Initiative (NMI) Technical Assistance (TA) Coordination Team Update for January 16, 2015. These e-mail updates are a collaboration among the Centers for Disease Control and Prevention (CDC), Council of State and Territorial Epidemiologists (CSTE), and the Association of Public Health Laboratories (APHL) and will be sent biweekly in an effort to keep reporting jurisdictions and other partners and stakeholders updated on the progress of NMI.

For more information on NMI, please see the NMI FAQS at http://www.cdc.gov/nmi/faq.html. If you have questions not answered in the FAQs, please send them to edx@cdc.gov.

NMI Overall Updates
- Upon the basis of what we have learned from the message mapping guide (MMG) development, implementation, and provisioning work, the NMI Team is updating the structure of the six priority MMGs. This change will not affect the content requested by the CDC programs but will provide more consistency in how case notification messages are built and processed.
    - The NMI Team recently provided draft materials (revised Generic v2 MMG, test scenarios, and test messages and the Hepatitis A core lab and vaccine variables) to APHL representatives of the NMI Technical Assistance (TA) Coordination Team for review and feedback.
    - The NMI Team expects to provide the restructured guides and related artifacts to APHL, NMI pilot states, and the Message Validation, Processing, and Provisioning (MVPS) Team from January–February 2015.
        - The NMI TA Coordination Team will assist Michigan—the only jurisdiction to have implemented a case notification message (hepatitis)—in re-building their hepatitis message.
        - APHL representatives from the NMI TA Coordination Team will work with other pilot jurisdictions to implement these changes once they are incorporated into Stage III Pilot Ready MMGs and the MVPS is ready to receive and process messages built to the updated structure.

Message Mapping Guide Development Updates
- **Message Mapping Guide Status Updates:**
    - CDC has formed an MMG standardization workgroup to address the issue of incorporating common laboratory and vaccine data elements in the HL7 messages for the priority MMGs. Topics under discussion include:
        - revising the current message structure specification;
        - opening currently restricted fields and segments;
        - grouping data elements into categories;

- using a consistent lab structure for laboratory data to allow transmission of lab findings from electronic laboratory reporting (ELR), hand-entry, or "epi questions"; and
- using a consistent vaccine structure.

- The "Methods for Conveying Unknown or Missing Values in Case Notification Messages" instructions were updated with new implementation guidelines for HL7 mapping of indicator values as "virtual" indicators instead of "literal" indicators.
  - The MMG Development Team completed CDC clearance of the document and e-mailed it to CSTE, APHL, and HL7 and NBS users within all jurisdictions to initiate the 2-week external review process from December 10–24, 2014.
  - The proposed next steps include the following:
    - The MMG Development Team is finalizing a response to the two comments received.
    - The MMG Development Team expects to post the final document on the Draft MMG Web site in January 2015.
    - The MMG Development Team expects to incorporate the indicators into the MMGs by the end of January 2015 and post the revised MMGs on the Draft MMG Web site as soon as possible.

- **Mumps and Pertussis MMGs** (Stage I—Draft Phase):
  - Because the review period for the "Methods for Conveying Unknown or Missing Values in Case Notification Messages" document has closed, the MMG Development Team expects to post the revised Mumps and Pertussis MMGs (aligned with the revised HL7 restructuring effort) in February 2015 for a second external review period of approximately 4 weeks.
  - During the external review period, the MVPS Team will develop draft internal data provisioning requirements.

- **Congenital Syphilis and STD MMGs** (Stage II—Reconciled Draft Phase)
  - The MMG Development Team is incorporating the STD Program's requests to add indicator values for selected date/numeric data elements and one expanded value set for a coded data element through additional implementation notes to describe the HL7 mapping guidelines for identifying unknown or missing values.
    - The MMG Development Team submitted reconciled versions of the STD test scenario and STD test messages for the current pilot with Michigan.
    - These versions of the artifacts do not include additional program requirements, such as unknown indicators/values and implementation notes.
  - The MMG Development Team has revised the Congenital Syphilis MMG to identify the infant as the focus of the case investigation rather than the mother and to address the addition of indicator elements.
  - The MMG Development Team will revise and post the STD and Congenital Syphilis MMGs (aligned with the revised HL7 restructuring effort) as soon as possible as Stage III—Pilot Test-ready Draft Phase versions of the MMGs, along with their artifacts. As the MMGs are updated, the MMG Development Team will provide them to the MVPS Team for implementation purposes.

- **Generic v2 and Hepatitis MMGs** (Stage III—Pilot Test-ready Draft Phase)

- The MMG Development Team has revised the Generic v2 MMG, test scenarios, and test messages to reflect the use of the new HL7 message structure (incorporating core lab and vaccine variables).
- The MMG Development Team also is revising the Hepatitis MMG, test scenarios, and test messages.
- The MMG Development Team expects to post updated versions of the Generic v2 and Hepatitis artifacts to the Draft MMG Web site by the end of January 2015.
  - No guides are in Stage IV—Final MMG Phase at this time.

Message Validation, Processing, and Provisioning System Updates

- When the message restructuring discussed in the "NMI Overall Updates" section is completed, MVPS and the Message Evaluation and Testing Service (METS) tool will be updated to reflect the new message structure.
  - The MVPS Team is currently working through the schedule and other artifacts to determine when deliverables for the new approach can be supported. More details will be provided as they are known.
- As noted previously, METS received its authorization to operate from CDC on 11/19/2014 and went into production on 12/4/2014.
  - METS will serve as a common message validation service to assist jurisdictions in preparing and sending messages to CDC as defined by the applicable messaging, vocabulary, and programmatic standards.
  - Specifically, METS allows jurisdictions to evaluate their test messages as they develop their systems to send messages to CDC, ensuring that their systems are generating messages that conform to the proper message type structure, business rules, and content.
  - The METS tool is available at https://mets.cdc.gov.
- The MVPS Team continues to work with CSTE and APHL to facilitate beta testing with Michigan, which is currently in progress.
- The MVPS Team has developed and provided data provisioning requirements to AgileX for Generic v2, Hepatitis, STD, and Congenital Syphilis. Following is the status of specific requirements provided to AgileX:
  - Generic v2:
    - The MVPS Team received the software build for Generic v2 from AgileX on the scheduled date of 8/29/2014.
  - Hepatitis:
    - The MVPS Team received the software build for Hepatitis from AgileX on the scheduled date of 9/26/2014.
  - STD:
    - The MVPS team received the software build from AgileX on 10/17/2014.
    - The NMI TA Coordination Team will work with Michigan to develop to the STD MMG when the guide reaches Stage III—Pilot Test-ready Draft Phase. As a result, testing of STD is expected to occur in 2015.
  - Congenital Syphilis:
    - The MVPS team received the software build for Congenital Syphilis on 12/19/2014.
  - Mumps and Pertussis:

- The MVPS team will not define dates for MVPS activities related to Mumps and Pertussis until those MMGs are finalized and posted for external partner review.
- The MMGs for Mumps and Pertussis have been redeveloped and will go through external partner review for a second time.
- The MVPS team will then develop technical requirements and support software development.

Technical Assistance Updates

- Update on Implementation of Hepatitis Messaging:
  - APHL representatives from the NMI TA Coordination Team kicked-off implementation for Hepatitis messaging with Oregon and New York on 12/17/2014. The team has begun gap analysis work with both jurisdictions.
  - APHL representatives from the NMI TA Coordination Team will be on site in Oregon from 2/3/15 to 2/5/2015 to build and validate messaging for Hepatitis.
- Update on Implementation of STD Messaging:
  - APHL representatives from the NMI TA Coordination Team began the STD gap analysis with Michigan, using the Stage II Reconciled Draft MMG, on 12/19/2014. Although the STD MMG is not yet Stage III Pilot Ready, CDC requested that the NMI TA Coordination Team make an exception to move the work forward with Michigan to beta test the guide prior to its release as Stage III Pilot Ready.
    - APHL representatives from the NMI TA Coordination Team plan to begin validation for STDs by the end of January 2015.
  - The NMI TA Coordination Team's reusable tools have been updated to incorporate STD data elements based on the Stage II draft STD MMG.
    - The NMI TA Coordination Team is testing internally the Rhapsody route for STDs the week of 1/12/15 and expects to share it with Michigan the week of 1/19/15.
  - The NMI TA Coordination Team has shared questions and feedback on the Stage II draft STD MMG, test scenarios, and test messages with the CDC MMG Team, upon the basis of the gap analysis work with Michigan.
- Jurisdictions selected for pilot testing of the test-ready versions of MMGs should wait until they are contacted by the NMI TA Coordination Team before using the Pilot-Test ready MMGs and submitting test messages to CDC. All other jurisdictions should not plan to submit data to CDC until the final MMGs have been posted to the PHIN Web site.
- For more information about technical assistance:
  - Please see the NMI FAQs at http://www.cdc.gov/nmi/faq.html.
  - For pilot jurisdictions: If you have questions specific to NMI TA, please contact Laura Carlton, contractor to APHL, at lcarlton@TSJG.com.
  - For non-pilot jurisdictions: If you have questions or would like to request TA for MMG implementation through the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) Cooperative Agreement, please email edx@cdc.gov.

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